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EXAMINER	
NGUYEN, TOAN D	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/608,944	PRICE ET AL.	
	Examiner	Art Unit	
	TOAN D. NGUYEN	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 June 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-47* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-47* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *27 June 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 06/11/08 has been entered.

Response to Arguments

2. Applicant's arguments with respect to claims 1-47 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1-7, 9-17, 20-24, 27-28 and 30-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Li (US 2004/0054804) in view of Edwards (US 6,873,619) further in view of Olafsson (US 6,785,371).

For claim 1, Li discloses system and method for failure recovery of high-speed modems, comprising:

monitoring a connectivity status of one or more connectivity sources (page 2, paragraph [0020], lines 4-5);

selecting one of one or more available connectivity sources for use for online communications (page 2, paragraph [0029], lines 3-12);

connecting a user's computer (figure 1, references 10-35, page 2, paragraph [0029], lines 3-5) to a remote computing system (figure 1, references 45 and 50) via the selected available connectivity source (page 2, paragraph [0029], lines 4-5);

if the selected connectivity source is lost, determining whether a second connectivity source is available (page 3, paragraph [0030], lines 3-6); and

if a second connectivity source is available, automatically connecting the user's computer to the remote computing system via the second connectivity source without user action (page 2, paragraph [0023], lines 5-8, and page 3 paragraph [0030], lines 3-8).

monitoring whether the connection to the remote computing system (figure 1, references 45 and 50) via the selected connectivity source has failed (page 3, paragraph [0030], lines 3-5); and

attempting reconnection to the remote computing system(page 3, paragraph [0037], lines 8-12).

However, Li does not expressly disclose:

if the connection is detected as failed, then scheduling a poll on a background software thread;

if the poll fails, then generating a notification that the connection to the remote computing system via the selected connectivity source is disconnected.

In an analogous art, Edwards discloses:

if the connection is detected as failed, then scheduling a poll on a background software thread (col. 12, lines 15-18);

if the poll fails, then generating a notification that the connection to the remote computing system via the selected connectivity source is disconnected (col. 12, lines 26-27).

One skilled in the art would have recognized the if the connection is detected as failed, then scheduling a poll on a background software thread, and would have applied Edwards' scheduled round robin polling devices into Li's detect the high speed modem. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to use Edwards' method, systems and computer program products for finding network segment paths in Li's system and method for failure recovery of high-speed

modems with the motivation being to provide faster and more accurate root cause analysis (col. 12, lines 15-16).

Furthermore, Li in view of Edwards does not expressly disclose:

reducing an interval at which reconnection to the remote computing system is allowed after not being able to connect to the remote computing system using the one of the one or more connectivity sources for a given time;

resetting the time period;

switching back to the reduced interval upon detecting at least one of a network change and a successful connection via the one of the one or more connectivity sources; and

marking the one or more connectivity sources as inoperable while the user's computer is shutting down to prevent subsequent online communication events from adding to shutdown delays.

In an analogous art, Olafsson discloses:

reducing an interval at which reconnection to the remote computing system is allowed after not being able to connect to the remote computing system using the one of the one or more connectivity sources for a given time period (col. 3, lines 29-32, and col. 18, lines 26-28);

resetting the time period (col. 18, lines 42-48);

switching back to the reduced interval upon detecting at least one of a network change and a successful connection via the one of the one or more connectivity sources (col. 18, lines 54-62); and

marking the one or more connectivity sources as inoperable while the user's computer is shutting down to prevent subsequent online communication events from adding to shutdown delays (col. 18, line 66 to col. 19, line 5).

One skilled in the art would have recognized the reducing an interval at which reconnection to the remote computing system is allowed after not being able to connect to the remote computing system using the one of the one or more connectivity sources for a given time period, and would have applied Olafsson's reduce the initialization time associated with reconnects after a line corrupting event or a channel interruption in Li's detect the high speed modem. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to use Olafsson's signaling mechanism for modem connection holding and reconnecting in Li's system and method for failure recovery of high-speed modems with the motivation being reconnected in a matter of seconds (col. 19, lines 4-5).

For claim 2, Li discloses whereby monitoring the connectivity status of one or more connectivity sources includes monitoring network connectivity hardware at the user's computer (page 3, paragraph [0030]).

For claim 3, Li discloses further comprising monitoring whether the user's computer is wired to a connectivity source (page 2, paragraph [0029], lines 5-6).

For claim 4, Li discloses further comprising monitoring whether signaling is received from a connectivity source via a wired connection (page 2, paragraph [0029], lines 5-6).

For claim 5, Li discloses further comprising monitoring whether the user's computer includes a wireless access card or antenna (page 2, paragraph [0029], lines 6-8).

For claim 6, Li discloses further comprising monitoring whether signaling is received via the wireless access card or antenna from a connectivity source (page 2, paragraph [0029], lines 6-8).

For claim 7, Li discloses whereby monitoring the connectivity status of one or more connectivity sources includes determining the data transfer speed and bandwidth capacity associated with a given connectivity source (page 2, paragraph [0020]).

For claim 9, Li discloses after monitoring the connectivity status of one or more connectivity sources, reporting the connectivity status to a network connection manager module (figure 2, reference 80, page 3, paragraph [0036]).

For claim 10, Li discloses further comprising reporting the connectivity status to a user's computer operating system (page 3, paragraph [0034]).

For claim 11, Li discloses prior to connecting the user's computer (figure 1, references 10-35) to a remote computing system (figure 1, references 45 and 50) via the selected available connectivity source, determining which of one or more available connectivity sources is a preferred connectivity source (page 2, paragraph [0029]).

For claim 12, Li discloses whereby determining which of one or more connectivity sources is a preferred connectivity source includes determining which of one or more available connectivity sources has a highest bandwidth capacity (page 2, paragraph [0029]).

For claim 13, Li discloses whereby selecting one or more available connectivity sources includes selecting one of the one or more available connectivity sources (page 2, paragraph [0029]) for connecting a software application in use on the user's computer to a remote server (figure 1, reference 10) for online communication services (page 3, paragraph [0032]).

For claim 14, Li discloses further comprising connecting the software application to a remote software application at the remote server for online communication services (page 3, paragraph [0032]).

For claim 15, Li discloses whereby connecting the user's computer to a remote computing system via the selected available connectivity source includes directing a connection software module to provide a provider connection software module with the selected available connectivity source (page 3, paragraph [0032]);

causing the provider connection software module to connect the user's computer to the remote computing system via the selected connectivity source (page 3, paragraph [0032]); and

directing an exchange provider software module to begin passing data calls from the user's computer to the remote computing system via the selected connectivity source (page 3, paragraph [0032]).

For claim 16, Li discloses further comprising communicating between the user's computer and the remote computing system via the selected connectivity source (page 3, paragraph [0032]).

For claim 17, Li discloses further comprising communicating via the selected connectivity source using a transmission control protocol/Internet protocol (TCP/IP) communication (page 1, paragraph [0005]).

For claim 20, Li discloses whereby monitoring the connectivity status of one or more connectivity sources includes determining whether a presently in use connectivity source is disabled (page 3, paragraph [0036]).

For claim 21, Li discloses further comprising determining whether a remote computing system with which the user's computer is communicating becomes disabled from communication with the user's computer (page 3, paragraph [0030], lines 3-6).

For claim 22, Li discloses whereby monitoring the connectivity status of one or more connectivity sources includes determining whether an available alternate connectivity source from the connectivity source presently in use is a preferred connectivity source (page 2, paragraph [0029]).

For claim 23, Li discloses further comprising determining whether an alternate connectivity source provides a higher bandwidth capacity from the connectivity source presently in use (page 2, paragraph [0029]).

For claim 24, Li discloses whereby if an available alternate connectivity source is a preferred connectivity source, automatically connecting the user's computer to the remote computing system via the alternate connectivity source (page 2, paragraph [0029]).

For claim 27, Li discloses further comprising notifying a user of the user's computer of any changes in connectivity status (page 3, paragraph [0036]).

For claim 28, Li discloses system and method for failure recovery of high-speed modems, comprising:

a connection manager module operative ((figure 2, reference 80)

to monitor a connectivity status of one or more connectivity sources (page 2, paragraph [0020], lines 4-5);

to select one of one or more available connectivity sources for use for online communications (page 2, paragraph [0029], lines 3-12);

to connect a client application (figure 1, references 10-35, page 2 paragraph [0029], lines 3-5) to a remote application (figure 1, references 45 and 50) via the selected available connectivity source (page 2, paragraph [0029], lines 4-5);

to determine whether a second connectivity source is available if the selected connectivity source is lost (page 3, paragraph [0030], lines 3-6); and

to automatically connect the client application to the remote application via the second connectivity source without user action if a second connectivity source is available (page 2, paragraph [0023], lines 5-8, and page 3 paragraph [0030], lines 3-8);

to monitor whether the connection to the remote computing system (figure 1, references 45 and 50) via the selected connectivity source has failed (page 3, paragraph [0030], lines 3-5); and

to attempt reconnection to the remote computing system(page 3, paragraph [0037], lines 8-12).

However, Li does not expressly disclose:

if the connection is detected as failed, then to schedule a poll on a background software thread;

if the poll fails, then to generate a notification that the connection to the remote computing system via the selected connectivity source is disconnected.

In an analogous art, Edwards discloses:

if the connection is detected as failed, then to schedule a poll on a background software thread (col. 12, lines 15-18);

if the poll fails, then to generate a notification that the connection to the remote computing system via the selected connectivity source is disconnected (col. 12, lines 26-27).

One skilled in the art would have recognized the if the connection is detected as failed, then to schedule a poll on a background software thread, and would have applied Edwards' scheduled round robin polling devices into Li's detect the high speed modem. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to use Edwards' method, systems and computer program products for finding network segment paths in Li's system and method for failure recovery of high-speed modems with the motivation being to provide faster and more accurate root cause analysis (col. 12, lines 15-16).

Furthermore, Li in view of Edwards does not expressly disclose:

to reduce an interval at which reconnection to the remote computing system is allowed after not being able to connect to the remote computing system using the one of the one or more connectivity sources for a given time;

to reset the time period;

to switch back to the reduced interval upon detecting at least one of a network change and a successful connection via the one of the one or more connectivity sources; and

to mark the one or more connectivity sources as inoperable while the user's computer is shutting down to prevent subsequent online communication events from adding to shutdown delays.

In an analogous art, Olafsson discloses:

to reduce an interval at which reconnection to the remote computing system is allowed after not being able to connect to the remote computing system using the one of the one or more connectivity sources for a given time period (col. 3, lines 29-32, and col. 18, lines 26-28);

to reset the time period (col. 18, lines 42-48);

to switch back to the reduced interval upon detecting at least one of a network change and a successful connection via the one of the one or more connectivity sources (col. 18, lines 54-62); and

to mark the one or more connectivity sources as inoperable while the user's computer is shutting down to prevent subsequent online communication events from adding to shutdown delays (col. 18, line 66 to col. 19, line 5).

One skilled in the art would have recognized the reduce an interval at which reconnection to the remote computing system is allowed after not being able to connect to the remote computing system using the one of the one or more connectivity sources

for a given time period, and would have applied Olafsson's reduce the initialization time associated with reconnects after a line corrupting event or a channel interruption in Li's detect the high speed modem. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to use Olafsson's signaling mechanism for modem connection holding and reconnecting in Li's system and method for failure recovery of high-speed modems with the motivation being reconnected in a matter of seconds (col. 19, lines 4-5).

For claim 30, Li discloses whereby the connection manager module is further operative to receive a preferred connectivity source for a computer operating system through which the client application is operating and to automatically connect the client application to the remote application via the preferred connectivity source if the preferred connectivity source is available (page 2, paragraph [0023] lines 5-8).

For claim 31, Li discloses whereby the connection manager module is further operative to direct a connection module to provide a provider connection software module with the selected available connectivity source (page 3, paragraph [0032]);

to direct the provider connection software module to connect the user's computer to the remote computing system via the selected connectivity source (page 3, paragraph [0032]); and

to direct an exchange provider software module to begin passing data calls from the user's computer to the remote computing system via the selected connectivity source (page 3, paragraph [0032]).

6. Claims 8, 18 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Li (US 2004/0054804) in view of Edwards (US 6,873,619) and Olafsson further in view of Hanson et al. (US 7,136,645).

For claims 8, 18 and 29, Li discloses whereby monitoring (page 2, paragraph [0020], lines 4-6) the connectivity status of one or more connectivity sources (page 2, paragraph [0029]. However, Li in view of Edwards and Olafsson does not expressly disclose monitoring the connectivity status by a network location awareness (NLA) application programming interface (API). In an analogous art, Hanson et al. disclose monitoring the connectivity status by a network location awareness (NLA) application programming interface (API)(figure 3, reference 206, col. 15, line27-29).

Hanson et al. disclose further comprising communicating by remote procedure calls (RPC) between the user's computer and the remote computing system over the TCP/IP communication connection (col. 11, lines 1-10 as set forth in claim 18).

For claim 29, Li discloses whereby the connection manager module is further operative to communicate to monitor network connectivity hardware at the user's computer (page 3, paragraph [0030]); to monitor whether the user's computer is wired to a connectivity source (page 2, paragraph [0029], lines 5-6); to monitor whether signaling is received from a connectivity source via a wired connection (page 2, paragraph [0029], lines 5-6); to monitor whether the user's computer includes a wireless access card or antenna (page 2, paragraph [0029], lines 6-8); to monitor whether signaling is received via the wireless access card or antenna from a connectivity source (page 2, paragraph [0029], lines 6-8); to determine the data transfer speed and bandwidth capacity

associated with a given connectivity source (page 2, paragraph [0020]); and to report the connectivity status to the connection manager module (figure 2, reference 80, page 3, paragraph [0036]); and Hanson et al. in view of Li disclose further operative to communicate with a network location awareness (NLA) application programming interface (API)(figure 3, reference 206, col. 15, lines 27-29 as set forth in claim 29).

One skilled in the art would have recognized the monitoring the connectivity status by a network location awareness (NLA) application programming interface (API), and would have applied Hanson et al.'s API in Li's detect the high-speed modem. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to use Hanson et al.'s method and apparatus for providing mobile and other intermittent connectivity in a computing environment in Li's system and method for failure recovery of high-speed modems with the motivation being shared sufficient knowledge of the connection state to maintain a coherent logical link at all times- even during physical interruption (col. 15, lines 34-38).

7. Claims 19 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Li (US 2004/0054804) in view of Edwards (US 6,873,619), Olafsson (US 6,785,371) and Blount et al. (US 6,070,184) further in view of Hanson et al. (US 7,136,645).

For claim 19, Li in view of Edwards and Olafsson does not expressly disclose whereby if communication using the TCP/IP communication connection fails, determining whether the user's computer is configured to communicate over the selected or second connectivity source using remote procedure calls over a hypertext

transfer protocol (HTTP) communication connection; and if the user's computer is configured to communicate over the selected or second connectivity sources using RPC over HTTP communication connection, connecting the user's computer to the remote application via RPC over HTTP communication connection via the selected or second connectivity source.

In an analogous art, Blount et al. disclose if communication using the TCP/IP communication connection fails, determining whether the user's computer is configured to communicate over the selected or second connectivity source using remote procedure calls over a hypertext transfer protocol (HTTP) communication connection (col. 6, line 53).

One skilled in the art would have recognized the if communication using the TCP/IP communication connection fails, determining whether the user's computer is configured to communicate over the selected or second connectivity source using remote procedure calls over a hypertext transfer protocol (HTTP) communication connection, and would have applied Blount et al.'s a hypertext transfer protocol (HTTP) communication connection in Li's detect the high-speed modem. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to use Blount et al.'s server-side asynchronous form management into Li's system and method for failure recovery of high-speed modems with the motivation being to communicate with an Internet web server (col. 6, lines 54-55).

Moreover, Li in view of Edwards, Olafsson and Blount et al. does not expressly disclose if the user's computer is configured to communicate over the selected or

second connectivity sources using RPC over HTTP communication connection, connecting the user's computer to the remote application via RPC over HTTP communication connection via the selected or second connectivity source. In an analogous art, Hanson et al. disclose if the client application is configured to communicate over the selected or second connectivity sources using RPC over HTTP communication connection, connecting the client application to the remote application via RPC over HTTP communication connection via the selected or second connectivity source (col. 11, lines 5-8).

One skilled in the art would have recognized the if the user's computer is configured to communicate over the selected or second connectivity sources using RPC over HTTP communication connection, connecting the user's computer to the remote application via RPC over HTTP communication connection via the selected or second connectivity source, and would have applied Hanson et al.'s RPC in Li's detect the high-speed modem. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to use Hanson et al.'s method and apparatus for providing mobile and other intermittent connectivity in a computing environment in Li's system and method for failure recovery of high-speed modems with the motivation being transported using the same such standard transport level protocols (col. 11, lines 1-10).

For claim 32, Li in view of Edwards and Olafsson does not expressly disclose whereby the connection manager is further operative to determine whether the client application is configured to communicate over the selected connectivity source using remote procedure calls over a hypertext transfer protocol (HTTP) communication

connection, if communication using a TCP/IP communication connection fails; and to connect the client application to the remote application by RPC over the HTTP communication connection via the selected connectivity source, if the user's computer is configured to communicate over the selected connectivity sources using RPC over the HTTP communication connection. In an analogous art, Blount et al. disclose a hypertext transfer protocol (HTTP) communication connection, if communication using a TCP/IP communication connection fails (col. 6, line 53).

One skilled in the art would have recognized the hypertext transfer protocol (HTTP) communication connection, if communication using a TCP/IP communication connection fails, and would have applied Blount et al.'s a hypertext transfer protocol (HTTP) communication connection in Li's detect the high-speed modem. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to use Blount et al.'s server-side asynchronous form management in Li's system and method for failure recovery of high-speed modems with the motivation being to communicate with an Internet web server (col. 6, lines 54-55).

Moreover, Li in view of Edwards, Olafsson and Blount et al. does not expressly disclose whereby the connection manager is further operative to determine whether the client application is configured to communicate over the selected connectivity source using remote procedure calls over a hypertext transfer protocol (HTTP) communication connection, if communication using a TCP/IP communication connection fails. In an analogous art, Hanson et al. disclose whereby the connection manager is further operative to determine whether the client application is configured to communicate over

the selected connectivity source using remote procedure calls over a hypertext transfer protocol (HTTP) communication connection, if communication using a TCP/IP communication connection fails (col. 11, lines 5-8).

One skilled in the art would have recognized the whereby the connection manager is further operative to determine whether the client application is configured to communicate over the selected connectivity source using remote procedure calls over a hypertext transfer protocol (HTTP) communication connection, if communication using a TCP/IP communication connection fails, and would have applied Hanson et al.'s RPC in Li's detect the high-speed modem. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to use Hanson et al.'s method and apparatus for providing mobile and other intermittent connectivity in a computing environment in Li's system and method for failure recovery of high-speed modems with the motivation being transported using the same such standard transport level protocols (col. 11, lines 1-10).

8. Claims 33-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Li (US 2004/0054804) in view of Edwards (US 6,873,619), Blount et al. (US 6,070,184) and Hanson et al. (US 7,136,645) further in view of Olafsson (US 6,785,371).

For claims 33, 40 and 47, Li discloses system and method for failure recovery of high-speed modems, comprising:

monitoring a connectivity status of one or more connectivity sources (page 2, paragraph [0020], lines 4-5);

selecting one of one or more available connectivity sources for use for online

communications (page 2, paragraph [0029], lines 3-12);

connecting a user's computer (figure 1, references 10-35, page 2 paragraph [0029], lines 3-5) to a remote computing system (figure 1, references 45 and 50) via the selected available connectivity source (page 2, paragraph [0029], lines 4-5);

if the selected connectivity source is lost, determining whether a second connectivity source is available (page 3, paragraph [0030], lines 3-6); and

if a second connectivity source is available, automatically connecting the user's computer to the remote computing system via the second connectivity source without user action (page 2, paragraph [0023] lines 5-8, and page 3 paragraph [0030], lines 3-8);

communicating via the selected or the second connectivity source using a transmission control protocol/Internet protocol (TCP/IP) communication (page 1, paragraph [0005], lines 5-7).

monitoring whether the connection to the remote computing system (figure 1, references 45 and 50) via the selected connectivity source has failed (page 3, paragraph [0030], lines 3-5); and

attempting reconnection to the remote computing system(page 3, paragraph [0037], lines 8-12).

However, Li does not expressly disclose:

if the connection is detected as failed, then scheduling a poll on a background software thread;

if the poll fails, then generating a notification that the connection to the remote computing system via the selected connectivity source is disconnected;

if communication using the TCP/IP communication connection fails, determining whether the client application is configured to communicate over the selected or second connectivity source using remote procedure calls over a hypertext transfer protocol (HTTP) communication connection; and

if the client application is configured to communicate over the selected or second connectivity sources using RPC over HTTP communication connection, connecting the client application to the remote application via RPC over HTTP communication connection via the selected or second connectivity source.

In an analogous art, Edwards discloses:

if the connection is detected as failed, then scheduling a poll on a background software thread (col. 12, lines 15-18);

if the poll fails, then generating a notification that the connection to the remote computing system via the selected connectivity source is disconnected (col. 12, lines 26-27).

One skilled in the art would have recognized the if the connection is detected as failed, then scheduling a poll on a background software thread, and would have applied Edwards' scheduled round robin polling devices into Li's detect the high speed modem. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to use Edwards' method, systems and computer program products for finding network segment paths in Li's system and method for failure recovery of high-speed

modems with the motivation being to provide faster and more accurate root cause analysis (col. 12, lines 15-16).

Moreover, Li in view of Edwards does not expressly disclose:

if communication using the TCP/IP communication connection fails, determining whether the client application is configured to communicate over the selected or second connectivity source using remote procedure calls over a hypertext transfer protocol (HTTP) communication connection; and

if the client application is configured to communicate over the selected or second connectivity sources using RPC over HTTP communication connection, connecting the client application to the remote application via RPC over HTTP communication connection via the selected or second connectivity source.

In an analogous art, Blount et al. disclose if communication using the TCP/IP communication connection fails, determining whether the client application is configured to communicate over the selected or second connectivity source using remote procedure calls over a hypertext transfer protocol (HTTP) communication connection (col. 6, line 53).

Blount et al. disclose whereby if a second connectivity source is not available, automatically switching the client application from an online to an offline state (col. 8, line 44 as set forth in claim 47).

One skilled in the art would have recognized the if communication using the TCP/IP communication connection fails, determining whether the client application is configured to communicate over the selected or second connectivity source using

remote procedure calls over a hypertext transfer protocol (HTTP) communication connection, and would have applied Blount et al.'s a hypertext transfer protocol (HTTP) communication connection in Li's detect the high-speed modem. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to use Blount et al.'s server-side asynchronous form management in Li's system and method for failure recovery of high-speed modems with the motivation being to communicate with an Internet web server (col. 6, lines 54-55).

Li in view of Edwards and Blount et al. does not expressly disclose if the client application is configured to communicate over the selected or second connectivity sources using RPC over HTTP communication connection, connecting the client application to the remote application via RPC over HTTP communication connection via the selected or second connectivity source. In an analogous art, Hanson et al. disclose if the client application is configured to communicate over the selected or second connectivity sources using RPC over HTTP communication connection, connecting the client application to the remote application via RPC over HTTP communication connection via the selected or second connectivity source (col. 11, lines 5-8).

Hanson et al. disclose whereby monitoring the connectivity status of one or more connectivity sources includes monitoring the connectivity status by a network location awareness (NLA) application programming interface (API) (figure 3, reference 206, col. 15, line27-29 as set forth in claim 40).

One skilled in the art would have recognized the disclose if the client application is configured to communicate over the selected or second connectivity sources using

RPC over HTTP communication connection, connecting the client application to the remote application via RPC over HTTP communication connection via the selected or second connectivity source, and would have applied Hanson et al.'s RPC in Li's detect the high-speed modem. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to use Hanson et al.'s method and apparatus for providing mobile and other intermittent connectivity in a computing environment in Li's system and method for failure recovery of high-speed modems with the motivation being transported using the same such standard transport level protocols (col. 11, lines 1-10).

Furthermore, Li in view of Edwards, Blount and Hanson et al. does not expressly disclose:

reducing an interval at which reconnection to the remote computing system is allowed after not being able to connect to the remote computing system using the one of the one or more connectivity sources for a given time;

resetting the time period;

switching back to the reduced interval upon detecting at least one of a network change and a successful connection via the one of the one or more connectivity sources; and

marking the one or more connectivity sources as inoperable while shutting down to prevent RPC during shutdown from adding to shutdown delays.

In an analogous art, Olafsson discloses:

reducing an interval at which reconnection to the remote computing system is allowed after not being able to connect to the remote computing system using the one of the one or more connectivity sources for a given time period (col. 3, lines 29-32, and col. 18, lines 26-28);

resetting the time period (col. 18, lines 42-48);

switching back to the reduced interval upon detecting at least one of a network change and a successful connection via the one of the one or more connectivity sources (col. 18, lines 54-62); and

marking the one or more connectivity sources as inoperable while shutting down to prevent RPC during shutdown from adding to shutdown delays (col. 18, line 66 to col. 19, line 5).

One skilled in the art would have recognized the reducing an interval at which reconnection to the remote computing system is allowed after not being able to connect to the remote computing system using the one of the one or more connectivity sources for a given time period, and would have applied Olafsson's reduce the initialization time associated with reconnects after a line corrupting event or a channel interruption in Li's detect the high speed modem. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to use Olafsson's signaling mechanism for modem connection holding and reconnecting in Li's system and method for failure recovery of high-speed modems with the motivation being reconnected in a matter of seconds (col. 19, lines 4-5).

For claim 34, Li discloses whereby monitoring the connectivity status of one or more connectivity sources includes monitoring network connectivity hardware at a user's computer on which the client application is running (page 3, paragraph [0030]).

For claim 35, Li discloses further monitoring whether the user's computer is wired to a connectivity source (page 2, paragraph [0029], lines 5-6).

For claim 36, Li discloses further comprising monitoring whether signaling is received from a connectivity source via a wired connection (page 2, paragraph [0029], lines 5-6).

For claim 37, Li discloses further comprising monitoring whether the user's computer includes a wireless access card or antenna (page 2, paragraph [0029], lines 6-8).

For claim 38, Li discloses further comprising monitoring whether signaling is received via the wireless access card or antenna from a connectivity source (page 2, paragraph [0029], lines 6-8).

For claim 39, Li discloses whereby monitoring the connectivity status of one or more connectivity sources includes determining the data transfer speed and bandwidth capacity associated with a given connectivity source (page 2, paragraph [0020]).

For claim 41, Li discloses whereby connecting the client application to a remote application via the selected available connectivity source includes directing a connection software module to provide a provider connection software module with the selected available connectivity source (page 3, paragraph [0032]);

causing the provider connection software module to connect the user's computer

to the remote computing system via the selected connectivity source (page 3, paragraph [0032]); and

directing an exchange provider software module to begin passing data calls from the user's computer to the remote computing system via the selected connectivity source (page 3, paragraph [0032]).

For claim 42, Li discloses whereby monitoring the connectivity status of one or more connectivity sources includes determining whether a presently in use connectivity source is disabled (page 3, paragraph [0036]).

For claim 43, Li discloses further comprising determining whether a remote application with which the client application is communicating becomes disabled from communication with the user's computer (page 3, paragraph [0030], lines 3-6).

For claim 44, Li discloses whereby monitoring the connectivity status of one or more connectivity sources includes determining whether an available alternate connectivity source from the connectivity source presently in use is a preferred connectivity source (page 2, paragraph [0029]).

For claim 45, Li discloses further comprising determining whether an alternate connectivity source provides a higher bandwidth capacity from the connectivity source presently in use (page 2, paragraph [0029]).

For claim 46, Li discloses whereby if an available alternate connectivity source is a preferred connectivity source, automatically connecting the client application to the remote application via the alternate connectivity source (page 2, paragraph [0029]).

9. Claims 25-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Li (US 2004/0054804) in view of Edwards (US 6,873,619) and Olafsson (US 6,785,371) further in view of Blount et al. (US 6,070,184).

For claims 25-26, Li in view of Edwards and Olafsson does not expressly disclose whereby if a second connectivity source is not available, automatically switching the user's computer from an online to an offline state. In an analogous art, Blount et al. disclose whereby if a second connectivity source is not available, automatically switching the client application from an online to an offline state (col. 8 line 44).

One skilled in the art would have recognized the whereby if a second connectivity source is not available, automatically switching the client application from an online to an offline state, and would have applied Blount et al.'s offline state in Li's detect the high-speed modem. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to use Blount et al.'s server-side asynchronous form management in Li's system and method for failure recovery of high-speed modems with the motivation being to provide for disconnected operation when the remote/mobile data processing system is not linked to a computer with access to a server application (col. 8 lines 34-36).

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to TOAN D. NGUYEN whose telephone number is (571)272-3153. The examiner can normally be reached on M-F (7:00AM-4:30PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Firmin Backer can be reached on 571-272-6703. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/T. D. N./
Examiner, Art Unit 2616

/FIRMIN BACKER/
Supervisory Patent Examiner, Art Unit 2616